Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Original) A method for providing interactive user navigation in a real-time three dimensional simulation, comprising the steps of:

combining physical elements from a predefined set of physical elements to construct a plurality of behavioral assemblies;

storing said plurality of behavioral assemblies in a library;

executing the real-time three dimensional simulation;

selecting one of said plurality of behavioral assemblies from said library during execution of the simulation, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation in the simulation.

2. (Original) The method of claim 1, wherein said combining step comprises:

presenting said predefined set of physical elements in a first window of a graphical user interface; and

selectively combining physical elements from said first window in a second window of said graphical user interface to construct said plurality of behavioral assemblies.

3. (Original) The method of claim 2, wherein said combining step further comprises:

adjusting a parameter of at least one of said selectively combined physical

elements in a third window of said graphical user interface.

4. (Original) The method of claim 3, wherein said combining step further

comprises:

simulating the performance of said plurality of behavioral assemblies in a

fourth window of said graphical user interface.

5. (Original) The method of claim 1, wherein said predefined set of physical

elements includes at least one of a passive element, a constraint, an active element, or a

resistive element.

6. (Original) The method of claim 1, wherein said selecting step comprises:

identifying a goal request;

translating said goal request into a plurality of tasks; and

selecting one of said plurality of behavioral assemblies from said library

to perform one of said plurality of tasks, wherein said selected one of said plurality of

behavioral assemblies provides a physics-based eye-point model for user navigation

during performance of said one of said plurality of tasks.

7. (Original) The method of claim 1, further comprising the steps of:

detecting a collision between said selected one of said plurality of

behavioral assemblies and an object in the real-time three dimensional simulation; and

invoking a real-time physics engine to model the interaction between said

selected one of said plurality of behavioral assemblies and said object.

8. (Original) A method for interactive user navigation in a real-time three

dimensional simulation, comprising the steps of:

combining physical elements from a predefined set of physical elements

to construct a plurality of behavioral assemblies;

storing said plurality of behavioral assemblies in a library;

executing the real-time three dimensional simulation; and

during execution of the real-time three dimensional simulation:

generating a goal request,

translating said goal request into a plurality of tasks, and

selecting one of said plurality of behavioral assemblies from said library

to perform one of said plurality of tasks, wherein said selected one of said plurality of

behavioral assemblies provides a physics-based eye-point model for user navigation

during performance of said one of said plurality of tasks.

9. (Currently Amended) A system for providing interactive user navigation in a

real-time three dimensional simulation, comprising:

an assembly builder, wherein said assembly builder includes a first

interface that permits a user to combine physical elements from a predefined set of

physical elements to construct a plurality of behavioral assemblies;

a library that stores said plurality of behavioral assemblies; and

a visual run-time application that executes the real-time three dimensional

simulation, wherein said visual run-time application includes a second interface that

receives a goal request from said user, and a navigation run-time module, said navigation

run-time module configured to receive said goal request from said second interface and

to select during said execution one of said plurality of behavioral assemblies from said

library based on said goal request, wherein said selected one of said plurality of

behavioral assemblies provides a physics-based eye-point model for interactive

navigation in the simulation.

10. (Original) The system of claim 9, wherein said first interface comprises a

first window that presents said predefined set of physical elements to said user and a

second window that permits said user to selectively combine physical elements from said

first window to construct said plurality of behavioral assemblies.

11. (Original) The system of claim 10, wherein said first interface further

comprises a third window that permits said user to adjust a parameter of at least one of

said selectively combined physical elements.

12. (Original) The system of claim 11, wherein said first interface further

comprises a fourth window that permits said user to simulate the performance of said

plurality of behavioral assemblies.

13. (Original) The system of claim 9, wherein said predefined set of physical

elements includes at least one of a passive element, a constraint, an active element, or a

resistive element.

14. (Original) The system of claim 9, wherein said navigation run-time module

comprises:

a goal interface, wherein said goal interface is configured to receive said

goal request from said second interface and to translate said goal request into a plurality

of tasks; and

a task interactor, wherein said task interactor is configured to receive said

plurality of tasks from said goal interface and to select one of said plurality of behavioral

assemblies from said library to perform one of said plurality of tasks, wherein said

selected one of said plurality of behavioral assemblies provides a physics-based

eye-point model for user navigation during execution of said one of said plurality of

tasks.

15. (Original) The system of claim 9, wherein said navigation run-time module

comprises:

a real-time physics engine;

wherein said navigation run-time module is configured to detect a

collision between said selected one of said plurality of behavioral assemblies and an

object in the real-time three dimensional simulation and to invoke said real-time physics

engine to model the interaction between said selected one of said plurality of behavioral

assemblies and said object.

16. (Original) A system for providing interactive user navigation in a real-time three dimensional simulation, comprising:

an assembly builder, wherein said assembly builder includes a first interface that permits a user to combine physical elements from a predefined set of physical elements to construct a plurality of behavioral assemblies;

a library that stores said plurality of behavioral assemblies; and

a visual run-time application that executes the real-time three dimensional simulation, wherein said visual run-time application includes a second interface that receives a goal request from said user, and a navigation run-time module, said navigation run-time module comprising:

a goal interface, wherein said goal interface is configured to receive said goal request from said second interface and to translate said goal request into a plurality of tasks, and

a task interactor, wherein said task interactor is configured to receive said plurality of tasks from said goal interface and to select one of said plurality of behavioral assemblies from said library to perform one of said plurality of tasks, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation during execution of said one of said plurality of tasks.

17. (Original) A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling a processor in a computer system to provide interactive user navigation in a real-time three dimensional simulation, said computer program logic comprising:

first means for enabling the processor to combine physical elements from a predefined set of physical elements to construct a plurality of behavioral assemblies;

second means for enabling the processor to store said plurality of behavioral assemblies in a library;

third means for enabling the processor to execute the real-time three dimensional simulation; and

fourth means for enabling the processor to select one of said plurality of behavioral assemblies from said library during execution of the simulation, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation in the simulation.

18. (Original) The computer program product of claim 17, wherein said first means includes:

means for enabling the processor to present said predefined set of physical elements in a first interface window; and

means for enabling the processor to present a second interface window, said second interface window permitting a user to selectively combine physical elements from said first interface window to construct said plurality of behavioral assemblies.

19. (Original) The computer program product of claim 18, wherein said first means further includes:

means for enabling the processor to present a third interface window, said third interface window permitting said user to adjust a parameter of at least one of said selectively combined physical elements.

20. (Original) The computer program product of claim 19, wherein said first means further includes:

means for enabling the processor to present a fourth interface window, said fourth interface window permitting said user to simulate the performance of said plurality of behavioral assemblies.

21. (Original) The computer program product of claim 17, wherein said predefined set of physical elements comprises at least one of a passive element, a constraint, an active element, or a resistive element.

22. (Original) The computer program product of claim 17, wherein said fourth means comprises:

means for enabling the processor to receive a goal request;

means for enabling the processor to translate said goal request into a plurality of tasks; and

means for enabling the processor to select one of said plurality of behavioral assemblies from said library to perform one of said plurality of tasks, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation during execution of said one of said plurality of tasks.

23. (Original) The computer program product of claim 17, further comprising:

means for enabling the processor to detect a collision between said selected one of said plurality of behavioral assemblies and an object in the real-time three dimensional simulation; and

means for enabling the processor to invoke a real-time physics engine to model the interaction between said selected one of said plurality of behavioral assemblies and said object.

24. (Original) A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling a processor in a computer system to provide interactive user navigation in a real-time three dimensional simulation, said computer program logic comprising:

first means for enabling the processor to combine physical elements from a predefined set of physical elements to construct a plurality of behavioral assemblies;

second means for enabling the processor to store said plurality of behavioral assemblies in a library;

third means for enabling the processor to execute the real-time three dimensional simulation; and

fourth means for enabling the processor to, during execution of the real-time three dimensional simulation, receive a goal request, translate said goal request into a plurality of tasks, and select one of said plurality of behavioral assemblies from said library to perform one of said plurality of tasks, wherein said selected one of said plurality of behavioral assemblies provides a physics-based eye-point model for user navigation during performance of said one of said plurality of tasks.